In the Specification

Please amend the first paragraph on page 2 as follows:

As described above, CT imaging is an imaging modality predicated upon the projection of radiographic imaging, e.g. x-rays, and reconstructing an image of the subject based on the subject's attenuation of the projected x-rays. Generally, driving an x-ray source at higher current levels produces images with less noise. On the other hand, extremely low x-ray tube current levels can cause ~~serve~~ severe artifacts in the reconstructed image. X-ray tube current may be characterized as being directly related to the amount of radiographic energy received by the subject, i.e. patient dose. As such, as x-ray tube current increases, so does the radiation dose received by the subject. While higher x-ray tube current levels result in less noisy images, higher tube current levels expose the subject to increased x-ray dose. Therefore, in establishing an imaging protocol for a given subject, a trade-off must be made between tube current and subject dose. Ideally, it is preferred to use the minimum radiation dose necessary to generate a diagnostically valuable image.

Please amend the first paragraph on page 8 as follows:

Switch arrays 80 and 82, Fig. 4, are multi-dimensional semiconductor arrays coupled between scintillator array 56 and DAS 32. Switch arrays 80 and 82 include a plurality of field effect transistors (FET) (not shown) arranged as multi-dimensional array. The FET array includes a number of electrical leads connected to each of the respective photodiodes 60 and a number of output leads electrically connected to DAS 32 via a flexible electrical interface [[84]] 83. Particularly, about one-half of photodiode outputs are electrically connected to switch 80 with the other one-half of photodiode outputs electrically connected to switch 82. Additionally, a reflector layer (not shown) may be interposed between each scintillator 57 to reduce light scattering from adjacent scintillators. Each detector 20 is secured to a detector frame 77, Fig. 3, by mounting brackets 79.

Please amend the first paragraph on page 9 as follows:

As shown in Fig. 5, by transmitting the appropriate decoder instructions, switch arrays 80 and 82 can be configured in the four-slice mode so that the data is collected about line C_L from four slices of one or more rows of photodiode array 52. Depending upon the specific configuration of switch arrays 80 and 82, various combinations of photodiodes 60 can be enabled, disabled, or combined so that the slice thickness may consist of one, two, three, or four rows of

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scintillator array elements 57. Additional examples include, a single slice mode including one slice with slices ranging from 1.25 mm thick to 20 mm thick, and a two slice mode including two slices with slices ranging from 1.25 mm thick to 10 mm thick. Additional modes beyond those described are contemplated.

Please amend the first paragraph on page 11 as follows:

As shown in Fig. 6, the magnitude at 92 corresponds to ten percent of peak-to-peak modulation. In addition to evaluating the waveform 84 at ten percent of peak- to-peak modulation, in illustrated example, the point corresponding to fifty percent of peak-to-peak modulation magnitude is also evaluated at 94. From these values or modulation factors 88-94, a linear or piece-wise approximation of the ideal tube current modulation waveform may be determined and used to control the high frequency of electromagnetic energy projection source. One skilled in the art will appreciate that to further approximate the ideal tube current modulation waveform 84, ~~addition~~ additional modulation points[[,]] or ~~magnitude~~ magnitudes (e.g. ninety percent of peak-to-peak modulation amplitude) may be evaluated.

Please amend the first paragraph on page 13 as follows:

In addition, to avoid over-exposure or under-exposure, it is contemplated that an error margin may be used to offset the values determined at the evaluated modulation points. For example, in one embodiment, the calculated or determined values are temporally (in x) offset by a negative amount or in magnitude (in y) by a positive amount. A ~~typically~~ typical value of adjustment is 0.02 and is applied in (y) where the waveform slope at the particular modulation point is less than one and is applied in (x) when the waveform slope at a particular modulation point is greater than one. The high frequency electromagnetic energy projection source will be commanded to generate x-rays or other radiographic energy in a matter as defined by the tube current modulation waveform 86 that is a linear approximation of the ideal tube current modulation waveform.

Please amend the second paragraph on page 13 as follows:

It is also contemplated that the approximate tube current modulation waveform may be determined by characterizing the low tube current flat region of the ideal waveform with a single reference point, e.g. ten percent of peak-to-peak modulation, and the remainder of the waveform with a polynomial expression of appropriate ~~degree~~ degree, e.g. a four point function. The

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polynomial expression may be fitted as a function of minimum diameter and oval ratio in a manner similar to that described ~~alone~~ above with respect to piecewise approximation. Additionally, other functions may be used such as an appropriate sinusoidal, elliptical, circular, parabolic or other appropriate analytic continuous function for which the parameters are fitted as a function of minimum diameter and/or oval ratio.

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